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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/690,030	10/21/2003	Richard Faulkner	PGI6044P1121US	4007
32116	7590	11/24/2004	EXAMINER	
WOOD, PHILLIPS, KATZ, CLARK & MORTIMER 500 W. MADISON STREET SUITE 3800 CHICAGO, IL 60661			GREENE, JASON M	
			ART UNIT	PAPER NUMBER
			1724	

DATE MAILED: 11/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/690,030

Applicant(s)

FAULKNER ET AL.

Examiner

Jason M. Greene

Art Unit

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 13 September 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 1-6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5/18/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of the filter media in the reply filed on 13 September 2004 is acknowledged. The traversal is on the ground(s) that the inventions are sufficiently closely related as to permit their consideration in the same application. This is not found persuasive because, as noted in the original requirement, the inventions are distinct since they are related as process of making and product made and the process of making can be used to make other and materially different products. The Examiner further reiterates that the restriction is proper since the inventions have acquired a separate status in the art as shown by their different classification and since the search required for the method of making claims is not required for the filter media claims.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 1-6 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 13 September 2004.

***Priority***

3. If applicant desires priority under 35 U.S.C. 119(e) based upon a previously filed application, specific reference to the earlier filed application must be made in the instant application. For benefit claims under 35 U.S.C. 120, 121 or 365(c), the reference must include the relationship (i.e., continuation, divisional, or continuation-in-part) of the applications. This should appear as the first sentence of the specification following the title, preferably as a separate paragraph unless it appears in an application data sheet. The status of nonprovisional parent application(s) (whether patented or abandoned) should also be included. If a parent application has become a patent, the expression "now Patent No. \_\_\_\_" should follow the filing date of the parent application. If a parent application has become abandoned, the expression "now abandoned" should follow the filing date of the parent application.

If the application is a utility or plant application filed under 35 U.S.C. 111(a) on or after November 29, 2000, the specific reference must be submitted during the pendency of the application and within the later of four months from the actual filing date of the application or sixteen months from the filing date of the prior application. If the application is a utility or plant application which entered the national stage from an international application filed on or after November 29, 2000, after compliance with 35 U.S.C. 371, the specific reference must be submitted during the pendency of the application and within the later of four months from the date on which the national stage commenced under 35 U.S.C. 371(b) or (f) or sixteen months from the filing date of the prior application. See 37 CFR 1.78(a)(2)(ii) and (a)(5)(ii). This time period is not

extendable and a failure to submit the reference required by 35 U.S.C. 119(e) and/or 120, where applicable, within this time period is considered a waiver of any benefit of such prior application(s) under 35 U.S.C. 119(e), 120, 121 and 365(c). A priority claim filed after the required time period may be accepted if it is accompanied by a grantable petition to accept an unintentionally delayed claim for priority under 35 U.S.C. 119(e), 120, 121 and 365(c). The petition must be accompanied by (1) the reference required by 35 U.S.C. 120 or 119(e) and 37 CFR 1.78(a)(2) or (a)(5) to the prior application (unless previously submitted), (2) a surcharge under 37 CFR 1.17(t), and (3) a statement that the entire delay between the date the claim was due under 37 CFR 1.78(a)(2) or (a)(5) and the date the claim was filed was unintentional. The Director may require additional information where there is a question whether the delay was unintentional. The petition should be addressed to: Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

### ***Drawings***

4. The drawings are objected to under 37 CFR 1.84(i) because Fig. 1 is not oriented such the reference numbers appear in a horizontal, left-to-right fashion when the page is either upright or turned so that the top becomes the right side. The drawings are objected to under 37 CFR 1.84(p)(1) because the view number of Fig. 1 is not oriented in the same direction as the view so as to avoid having to rotate the sheet. Specifically, Fig. 1 is oriented in landscape while the view number (i.e. "Fig. 1") is oriented in portrait.

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### ***Information Disclosure Statement***

5. Due to a typographical error, it appears as though Applicants incorrectly cited US Patent 3,458,705 in the IDS submitted on 18 May 2004. Specifically, it appears as though Applicants intended to cite US Patent 3,485,706 instead of 3,458,705. The Examiner notes that US Patent 3,485,706 to F.J. Evans has been considered and made of record on the attached Form PTO-1449.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 7-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 7-9 recite the filter media having machine-direction and cross-direction shrinkage of less than about 3 percent or less than about 2 percent. However, the claims fail to recite the temperature or temperatures at which the shrinkage properties are to be measured. Since it is well known in the art that the degree of shrinkage is a function of temperature, the limitation renders the claim indefinite. Since the specification is also silent as to the temperature at which the shrinkage is to be measured, the Examiner has assumed the recited shrinkage property to mean a maximum shrinkage up to the melting point of the fibers used to form the filter media.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 7-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lim et al. in view of Meny et al.

Lim et al. discloses a thermally bonded laminate filter media structure capable of filtering gases and liquids and comprising hydroentangled, predominant staple length fibers and a polyethylene scrim having a basis weight of 4.19 oz/yd<sup>2</sup> (Sample G, Table 3) in col. 3, line 41 to col. 9, line 66. Lim et al. discloses a second embodiment of the thermally bonded filter media (Sample A, Table 5) having a basis weight of 2.80 oz/yd<sup>2</sup> and a Mullen burst strength of 91.8 psi in col. 9, lines 50-66.

While it is well known in the art that basis weight and Mullen burst strength are proportionally related, the reference does not teach the Mullen burst strength of the filter media having a basis weight of 4.19 oz/yd<sup>2</sup>. Additionally, Lim et al. is silent as to the machine-direction and cross-direction shrinkage and tensile strengths of the disclosed filter medias. Furthermore, Lim et al. does teach the scrim being electro-conductive.

Lim et al. teaches thermally bonding the filter media at higher temperatures to increase permeability in col. 5, lines 1-30 and col. 9, lines 38-43. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to increase the thermal bonding temperature to provide a filter media having increased permeability and a lower pressure drop. The Examiner notes that as the thermal bonding temperature is increased, the mechanical properties (e.g. Mullen burst



strength, shrinkage, and tensile strength) of the filter media will be improved due to increased bonding between adjacent fibers. Therefore, as one of ordinary skill in the art increases the thermal bonding temperature of the filter media having a basis weight of 4.19 oz/yd<sup>2</sup> to improve the permeability, the mechanical properties will simultaneously be improved such that the Mullen burst strength will be at least 198 psi, the machine-direction tensile strength will be at least 52 lb/in, the cross-direction tensile strength will be at least 55 lb/in, and the machine-direction and cross-direction shrinkage will be less than about 2 percent.

Meny et al. discloses adding conductive carbon black to polypropylene filter media material in col. 8, lines 53-57.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the carbon black additive of Meny et al. into the filter media of Lim et al. to prevent debris from electrostatically accumulating on the filter media, as is well known in the art.

### ***Conclusion***

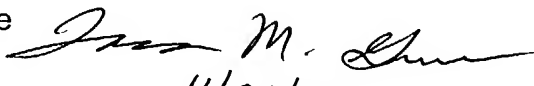
10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Frankenburg, Homonoff et al., Wise et al., Kirayoglu, Haid et al., Black et al. '862, Pearce et al., Black et al. '912, Black et al. '288, and Hartgrove et al. disclose similar filter media.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Greene whose telephone number is (571) 272-1157. The examiner can normally be reached on Monday - Friday (9:00 AM to 5:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jason M. Greene  
Examiner  
Art Unit 1724

  
11/21/04

jmg  
November 21, 2004